

Date: Fri, 15 Oct 93 04:31:32 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V93 #78
To: Ham-Ant

Ham-Ant Digest Fri, 15 Oct 93 Volume 93 : Issue 78

Today's Topics:

2m antenna for apartment?
 Anouncing new club
 J-Pole Antenna Design
 M2 Eggbeater Ant - Info?
 Mobile Antennas (3 msgs)
 Problem with Diamond SG7900
 Rotatable Dipole

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>

Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 14 Oct 1993 15:46:43 GMT
From: haven.umd.edu!darwin.sura.net!news.Vanderbilt.Edu!news@ames.arpa
Subject: 2m antenna for apartment?
To: ham-ant@ucsd.edu

I have a HTX-202 and am looking for a low cost antenna that I could install
in my apartment. I already have the rubber duck and I bought a telescoping
antenna from Radio Shack, but this did not seem to make much difference.
I would like something that I can put inside my apartment yet won't look
like crap and clutter up the place. I have heard of 'stick on window' type
antennas...what are the opinions on these. I also do a lot of traveling and
have seen antennas you can roll up and put in your pocket. Do these things
work or is it just a lot of hype?

Thanks for the info...Win
heagyws@ctrvax.vanderbilt.edu

Date: 14 Oct 1993 17:28:05 GMT
From: jgervais@ucsd.edu
Subject: Anouncing new club
To: ham-ant@ucsd.edu

In article <29iio2\$rtip@crcnis1.unl.edu> mcduffie@unlinfo.unl.edu (Gary McDuffie Sr) writes:

>tsm@bilbo.baylor.edu (Tony S. Mangefeste) writes:

>

>~~~ deleted ~~~

>

>>HAM _IS_ cool! (And YET another information highway, as if internet wasn't
>>enough! ;-)

>

>Congrats on the club. But...

>

>Please! HAM RADIO is cool, HAM is food! I don't know where these
>newcomers got this HAM thing, but it's sure getting irritating.

>

>~~~ deleted !!!

>

Umm... This was tongue-in-cheek and you forgot the smiley
faces for the humor impaired, right? This may be Tony's
first post to the Net and it would be a shame if he
misinterpreted that.

So just in case...

I've been a HAM for a good while (not an OF yet, but working
on it!). My elmer has been a HAM longer than I've been alive,
and I'm thinking of going to the HAM Radio Outlet this afternoon
to look at some gear. But I have no idea where these new guys
are picking this up...

That is, assuming you were serious. Which I'm sure you weren't.

Congrats on the club, Tony. And yes, ham radio is quite cool. :)

73,

Joe Gervais jgervais@ucsd.edu
KD6PRD/AG "20 WPM or Bust!"

"The largest hack begins with a single kludge."
- Not quite Confucious

Date: 13 Oct 93 19:00:00 GMT
From: ogicse!uwm.edu!cs.utexas.edu!oakhill!val!afarm!fredmail@network.ucsd.edu
Subject: J-Pole Antenna Design
To: ham-ant@ucsd.edu

DC> From: dcameron@unixg.ubc.ca (David Cameron)
DC> Newsgroups: rec.radio.amateur.antenna
DC> Organization: The University of British Columbia
DC> Date: 13 Oct 93 16:57:20 GMT

Congratulations David! As for a 2m/70cm J-pole, get you a copy of the 1993 ARRL Handbook. Find the chapter (Working the Pacsats)#22??, in it you will find complete plans for a dual band J-Pole antenna. I built one over a weekend. Make sure you use Penetrox antioxide compound on ALL of the aluminum joints!, otherwise they will oxidize in short order. I used a diplexer at the antenna end so I would only have to use 1 coax cable to feed both antennas.

I installed my J-Pole about 10 metres high and attached it to a Yaesu FT530, It works great!

```

      |
      | |   <- 70cm
      | |
      |_|
      |
      |
2m -> | |
      | |
      |_|
      |
      |   <- I mounted the diplexer where the
          ant connects to the mast.
```

Gregory < KB5YK0 >

... .
___ via Silver Xpress V3.02

Date: Thu, 14 Oct 1993 20:27:10 GMT
From: swrinde!elroy.jpl.nasa.gov!usc!howland.reston.ans.net!vixen.cso.uiuc.edu!newsrelay.iastate.edu!news.iastate.edu!news@network.ucsd.edu
Subject: M2 Eggbeater Ant - Info?

To: ham-ant@ucsd.edu

Just a quick inquiry to netters who have experience using the M2 "Eggbeater" horizontally-polarized 2 meter antenna.

I'm considering a purchase of this antenna for use on 2m SSB (omnidirectional) and for the RS satellites, and would like to decide quickly (within a few days) whether this ANT would be a good addition to my "farm", before the #\$\$^@*^% cold weather sets in.

I am aware of the product review on this antenna recently published in QST, but I'd like any additional comments from users of this unusual antenna as to performance, quality of manufacture, benchmark comparisons with other ants, or published figures for gain, directionality, change from horiz. to Circ. polarization, etc.

You may Internet me directly at s1.rsw@isumvs.iastate.edu, or post any comments here if you feel they would be of general interest.

Thanks in advance for your comments.

Rob Wallace, WA2SP0

Conserve Biodiversity, Conserve Habitat
Ensure a healthy planet.

Date: 14 Oct 93 13:37:56 GMT
From: ogicse!emory!kd4nc!ke4zv!gary@network.ucsd.edu
Subject: Mobile Antennas
To: ham-ant@ucsd.edu

In article <guN0ac5w165w@jackatak.raider.net> root@jackatak.raider.net (Jack GF Hill) writes:

>
>For HF work, the antenna is the MOST important piece of gear (and that
>goes for fixed or mobile) and given the restrictions on short antennas
>imposed by mobiling (less than 13'6" tall) and the need for a good
>ground path and counterpoise, using a compromise mounting system like
>a magnet mount is likely to be very disappointing. It isn't that it
>won't work, because it will. It is more that you will become quickly
>frustrated and discouraged with noise (HF is a bear for noise, and the
>minor vibrations of a magnetic mount can drive you bonkers in
>minutes!) and with signal levels... that takes the fun out, and
>without fun....

I'd echo Jack's comments and expand upon them a bit. Proper installation is *the* critical issue in any radio setup. Even a less than perfect

antenna will outperform a better antenna that is installed incorrectly.
This applies at nearly *any* frequency.

The number of hams who spend extraordinary amounts of money on *gimmicks* instead of taking drill in hand and doing a proper installation is quite disappointing. Glass mounts, magmounts, etc are poor expedients even with the best of antenna designs. Save yourself a world of grief, do it right, and you only have to do it once.

Gary

--

Gary Coffman KE4ZV	"If 10% is good enough	gatech!wa4mei!ke4zv!gary
Destructive Testing Systems	for Jesus, it's good	uunet!rsiatl!ke4zv!gary
534 Shannon Way	enough for Uncle Sam."	emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244	-Ray Stevens	

Date: 14 Oct 1993 14:12:03 -0700
From: news.service.uci.edu!paris.ics.uci.edu!not-for-mail@network.ucsd.edu
Subject: Mobile Antennas
To: ham-ant@ucsd.edu

Kevin brings up some interesting points. I wonder about two things - anyone else think about this?

1. Mounting mobile antennas on a VW van? I once mounted a Hustler down on the bumper of one of these, and it "worked", but I sense that is not a good place for it. Anyone try the side? Mounts to hold on the thin metal? (A plate on the inside?)
2. How do you tune the bugcatcher? Just tap the coil from the bottom and/or the top? I have a homebrewed bugcatcher, and have only used it with a tuner and tapping from the bottom - anyone else doing it differently? I use an old Radio Shack clip lead. I only run a hundred watts maximum.... and often a lot less (even have decent QSO's with 5 watts out during good conditions!)

Clark
WA3JPG

Date: 14 Oct 1993 19:21:04 GMT
From: yeshua.marcam.com!news.kei.com!newsstand.cit.cornell.edu!
newsstand.cit.cornell.edu!usenet@uunet.uu.net
Subject: Mobile Antennas

To: ham-ant@ucsd.edu

In article <guN0ac5w165w@jackatak.raider.net> Jack GF Hill,
root@jackatak.raider.net writes:

>Try that lash-up, or make a mount like it to start. Then, if you think
>you still might like HF mobiling (I love it, but I am a masocist! ;^)
>try a real antenna, like a BugCatcher from GLA Systems (Not connected,
>just a Customer -- real satisfied! ;^) and PROPERLY installed, with
>bonding straps connecting the body of your truck with the cab, and
>tying the exhaust system in as well... otherwise, you'll have 20 over
>S-9 noise and no fun at all!

>

>73, Jack/W4PPT

Hi Jack and Gary, et al...

I'm interested in improving my mobiling arrangements. Currently I'm using a number of hamstick and ten-tec helically loaded type whips on a home brewed "ugly mount" that has a 1 foot square baseplate mag mounted so that it is right against the surface of the roof. I designed it to give a fair bit of capacitance and to get around the usual 'up on the magnets, no where near the roof' problem I saw in most of the other mounts. Seems to work real good on 10 down to 40 - so maybe I don't need to really 'fix' it. But I have seen the reports about how good the bug catcher works, and that it makes the most field strength in actual tests.

The problem I see with running one of those is the vehicle - a dodge carvan. I think the bug catcher is even taller than the whips I'm running and more fragile (certainly more expensive than \$16 if I whack it on the trees, which happens regularly). Starting from a roof at 5 foot or higher and going up makes it very tall. I have tried to run antennas mounted on the sides of other vehicles like a rabbit, and they do very poorly - which is why I went to the roof mount.

I'm also wondering about how hard it is to change bands. If I have to demount the antenna and change taps - or get up to that coil (at maybe 8 feet in the air!) if it's roof mounted, thats not going to work too well. With the current arrangements, 20 on up needs no tuning, and 40 I just tune for one spot in the band and hang around there. I have thought about putting a tuning cap and maybe a roller inductor in the box at the base of the antenna to allow some limited tuning. (or maybe a lot of tuning, use 20 meter whip on 30, 15 on 18, etc) but that is a project that will get done RSN no doubt.

Gary, you mention 'doing it right' with the drill and all. I'm not averse to putting holes in the body - but I really think that if I pull down the inner decorative headliner, that it will never get back in place the way it's supposed to be. And it'll probably get wet. I'm willing to be

educated. :-)

So, comments on how to make the current mag mount more effective? (home brew some high q whips maybe?) How to mount a bug catcher and some more info on how they work and are tuned between bands? Idiot proof methods of putting holes in the van (I know, I'll sit inside with my 12ga slug gun pointed up and have someone yell "PULL!" - sort of the snake in the boat deal in reverse (Gary I 'bout fell out of my chair laughing on that one - thanks for sharing!)) without ending up with the headliner draped all over? Any ideas on a simple base mounted remote tuning arrangement? (I'm thinking I might be able to do a manual pull over and tune arrangement with an old ARC 5 cap and a tapped inductor). Toss some ideas at me.

I really get a kick out of the mobiling and have lately found that I spend a surprising amount of my time at it on 40 meters. (along with 2 and 70 - but there's nobody to talk to there on the road) Now that motorcycle season is winding down, I'm interested in doing even more of it.

Oh btw, the rig is either an argosy or sometimes the 757GX. (I like the 757 because I can listen to SW when I get tired of hamming). Mostly voice, occasional CW on the long straight roads like RT88 BGM to ALB, and sometimes RTTY/AMTOR when parked.

TIA and 73 for now

Kevin, WB2EMS

Date: Sat, 09 Oct 1993 20:58:39 GMT
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!math.ohio-state.edu!caen!malgudi.oar.net!witch!wabbit!rburns@network.ucsd.edu
Subject: Problem with Diamond SG7900
To: ham-ant@ucsd.edu

>I've started to notice that transmit and receive have really fallen off
>on the UHF side of the antenna, for no obvious reason.

Are you using a duplexer? If so, check it, too. I recently found that a Diamond MX-72H duplexer I was using with a different Diamond antenna had failed somehow and the attenuation on the 440 side was dramatic.

>Any recommendations on how to get in touch with Diamond?

That's easy. Call their US importer, RF Parts in San Marcos CA, at 619-744-0900. They are pretty easy to deal with and even though my duplexer is out of warranty, they offered to check it out and repair

it if it proved to be a component failure.

Good luck!

Bob N9KRS

Date: Thu, 14 Oct 1993 20:26:21 GMT
From: news.cerf.net!pagesat!indirect.com!indirect.com!kg7bk@network.ucsd.edu
Subject: Rotatable Dipole
To: ham-ant@ucsd.edu

I presently have a 105 ft 300 ohm ladder-line center-fed dipole, evolved from a G5RV. It works very well but is difficult to load on 10,15, and 17 meters and has holes in its coverage, i.e. no broadside radiation on 17 meters. That means I can cover the world on 17 meters except for Austrailia and South Africa. I needed a simple antenna that would fill in the holes and maybe even be easier to match with my antenna tuner. I played around with ELNEC and came up with a rotatable dipole that is worth sharing.

There is a center insulator with 7 ft of half inch aluminum tubing extending out in opposite directions. Connected to each end of the aluminum tubing is a Radio Shack fiberglass 102 inch CB whip which droops no more that a foot. That makes the dipole 31 feet across. It is fed with low-loss 300 ohm ladder-line and does require an antenna tuner although the SWRs are considerably lower than the 105 ft center-fed dipole.

Unlike the 4-lobed 105 ft center-fed dipole, this antenna has a typical dipole-like broadside radiation pattern from 14 MHz to 30 MHz. Here are the dbi gains calculated using ELNEC with a 30 ft high antenna.

14.3MHz-6.3dbi, 18.14MHz-8.2dbi, 21.3MHz-8.6dbi, 24.95MHz-7.9dbi,
28.4MHz-8.0dbi, 29.6MHz-8.3dbi

73, Cecil, kg7bk@indirect.com

Date: 14 Oct 93 13:26:09 GMT
From: ogicse!emory!kd4nc!ke4zv!gary@network.ucsd.edu
To: ham-ant@ucsd.edu

References <1993Oct11.214422.28185@vitsemi.com>,
<1993Oct12.134620.20542@ke4zv.atl.ga.us>,
<SBROWN.93Oct13064820@charon.dseg.ti.com>
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: Proper J-Pole Grounding

In article <SBROWN.930ct13064820@charon.dseg.ti.com> sbrown@charon.dseg.ti.com (Steve Brown) writes:

>In article <19930ct12.134620.20542@ke4zv.atl.ga.us>

>gary@ke4zv.atl.ga.us (Gary Coffman) writes in response to a question from

>rob@vitsemi.com (Rob Eccles):

>

>> >I have a copper pipe J-Pole antenna that I plan to mount

>> >on my roof.

>> >

>> >My question is how should I ground it, especially for

>> >safety? My plan is to connect a ground wire to the

>> >base of the antenna and run that to an earth ground.

>> >

>> >What should I use as a ground wire? I favor using

>> >copper braid. Where can I purchase this?

>>

>> Wherever Belden products are sold. However, braid is expensive,

>> and not really good enough for the job. Much better is 5 inch

>> wide copper flashing, available in rolls from roofing supply houses

>> and some electronics suppliers.

> [... some (correct as usual) stuff deleted...]

>> Gary

>

>Gee, Gary, why don't we suggest that the guy run 2" X 6" solid copper

>bus bar! :-)

>

>I assert that everything you do for lightening protection is a

>compromise. You are trying to increase your odds that your house and

>equipment will not be damaged by nearby lightening while trying not to

>bankrupt yourself in the meantime. Additionally, I assert that shield

>braid stripped off old, useless coax is a reasonable compromise.

Well I assert, from personal and broadcast experience spanning 30 years, that you can design a system that will handle *direct lightning strikes* on a routine basis. It takes some planning and careful layout, but it's not hard, nor is it overly expensive. At WXIA-TV, my other job, we take direct lightning strikes nearly every time there's a thunderstorm. Our downtime from such strikes is almost non-existent. The last time we went down from a strike, it was due to a strike on the power company's lines knocking *them* out, and our local generator picked up the load 12 seconds later.

I have a 440 MHz repeater located at the 970 foot level of that tower, and it has suffered no lightning damage in 4 years of operation, though there are burn marks on the repeater antenna from direct strikes.

As in the shoemaker's case where his own children are barefoot, I took \$10,000 worth of damage to my home station from a direct hit 3 years

ago. That was because I didn't practice what I *knew* were effective lightning protective methods. After redoing the station following the hit, I've taken at least two more direct strikes, maybe more since I'm not home for every storm. There was *no* damage from the first, and the second got a Radio Shack UHF preamp mounted on my UHF TV antenna, but *not* the TV in the house thanks to proper protection. I could have protected the preamp too, but it wasn't worth the effort. A new one is cheaper than the protective measures required.

Since my disastrous strike, I've been campaigning vigorously to educate amateurs that you *can* avoid damage from direct strikes. The belief that there's no protection from direct strike damage is *myth*. It's equally myth that a blitz bug and a piece of #12 wire will protect you from nearby strikes. In fact, if you install suppressors *slightly* wrong, they can be worse than no protective measures at all. Let me repeat that since it's vitally important, incorrectly installed suppressors can be worse than no suppressors at all. The instructions that come with suppressors, if any, are woefully incomplete and misleading. Ask an expert, or even better, become an expert on the subject.

The keys to effective lightning protection are surprisingly simple, and surprisingly less than obvious. Of course you *must* have a single point ground system that eliminates all ground loops. And you must present a low *impedance* path for the energy to go. That's most generally a low *inductance* path rather than just a low ohm DC path. Lightning energy is RF, and incredible voltages can build up across very small inductors when we're dealing with thousands of amps of surge current. The surge is very brief, so huge bussbars aren't needed, but the protective conductors must be low impedance at the frequencies of interest.

Gary

--

Gary Coffman KE4ZV	"If 10% is good enough	gatech!wa4mei!ke4zv!gary
Destructive Testing Systems	for Jesus, it's good	uunet!rsiatl!ke4zv!gary
534 Shannon Way	enough for Uncle Sam."	emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244	-Ray Stevens	

End of Ham-Ant Digest V93 #78
